What is claimed is:

1. An isolated ruminant nucleic acid molecule comprising a nucleic acid sequence selected from SEQ ID NO:7-9 and 22-46, the expression of said nucleic acid being elevated during BVDV infection.

2. The isolated ruminant nucleic acid molecule of claim 1, wherein the nucleic acid sequence is selected from SEQ ID NO:7-9, the expression of said nucleic acid being elevated during acute BVDV infection.

3. The isolated ruminant nucleic acid molecule of claim 1, wherein the nucleic acid sequence is selected from SEQ ID NO:22-46, the expression of said nucleic acid being elevated during persistent BVDV infection.

4. The nucleic acid molecule of claim 1, which is DNA.

5. The DNA molecule of claim 4, which is a cDNA.

6. An isolated RNA molecule transcribed from the nucleic acid of claim 1.

7. An oligonucleotide between about 10 and about 200 nucleotides in length, which specifically hybridizes with a nucleic acid molecule of SEQ ID NO:7-9 and 22-46.

8. The oligonucleotide of claim 7, which is between about 15 and about 30 nucleotides in length.

9. An isolated ruminant protein or peptide fragment encoded by a nucleic acid molecule of SEQ ID NO:7-9 and 22-46, expression of said encoded protein or peptide fragment being elevated during BVDV infection.

10. The isolated ruminant protein or peptide fragment of claim 9, wherein the protein or peptide fragment is encoded by a nucleic acid molecule of SEQ ID NO:7-9, and expression of said protein or peptide fragment is elevated during acute BVDV infection.

11. The isolated ruminant protein or peptide fragment of claim 9, wherein the protein or peptide fragment is encoded by a nucleic acid molecule of SEQ ID NO:22-46, and expression of said protein or peptide fragment is elevated during persistent BVDV infection.

12. An antibody immunologically specific for the isolated protein or peptide fragment of claim 9.

13. An antibody as claimed in claim 12, said antibody being monoclonal.

14. An antibody as claimed in claim 12, said antibody being polyclonal.

15. A nucleic acid comprising the 5' untranslated, promoter region of a BVDV infection specific marker.

16. A nucleic acid construct as claimed in claim 15, said 5' untranslated promoter region being operably linked to a sequence encoding a reporter gene.

17. A method for diagnosing BVDV in a ruminant test animal comprising:

a) obtaining at least one biological sample from a test animal and from a non-BVDV infected animal;

b) contacting said sample with primers which specifically amplify one or more nucleic acids of SEQ ID

NO:3-46;

c) performing polymerase chain reaction on said samples; and

d) detecting amplified nucleic acids, an elevation of said nucleic acid level obtained from said test animal, relative to that obtained from said non-BVDV infected animal being indicative of BVDV in said test animal.

18. The method of claim 17, wherein an elevation in one or more nucleic acid molecule of SEQ ID NO:3-9 is indicative of acute BVDV infection.

19. The method of claim 17, wherein an elevation in one or more nucleic acid molecule of SEQ ID NO:10-46 is indicative of persistent BVDV infection.

20. The method of claim 17, wherein said biological sample is selected from the group consisting of blood, mononuclear cells present in blood, tissue, and urine.

21. The method of claim 17, wherein said ruminant test animal is selected from the group consisting of a bovine, a pregnant bovine, and a bovine calf.

22. A method for diagnosing BVDV in a ruminant test animal comprising:

a) obtaining at least one biological sample from a test animal and from a non-BVDV infected animal;

b) contacting said samples with a detectably labeled antibody immunospecific for one or more proteins or peptide fragments encoded by the nucleic acid sequences shown in SEQ ID NO:3-46; and

c) detecting ruminant protein or peptide fragment, an elevation of said protein or peptide fragment level

obtained from said test animal, relative to that obtained from said non-BVDV infected animal being indicative of BVDV in said test animal.

23. The method of claim 22, wherein an elevation in one or more protein or peptide fragment encoded by a nucleic acid molecule of SEQ ID NO:3-9 is indicative of acute BVDV infection.

24. The method of claim 22, wherein an elevation in one or more protein or peptide fragment encoded by a nucleic acid molecule of SEQ ID NO:10-46 is indicative of persistent BVDV infection.

25. The method of claim 22, wherein said biological sample is selected from the group consisting of blood, mononuclear cells present in blood, tissue, and urine.

26. The method of claim 22, wherein said ruminant test animal is selected from the group consisting of a bovine, a pregnant bovine, and a bovine calf.

27. A method for diagnosing BVDV in the fetus of a pregnant ruminant test animal comprising:

a) obtaining at least one biological sample from a pregnant test animal and from a non-BVDV infected animal;

b) contacting said samples with primers which specifically amplify one or more nucleic acid shown in SEQ ID NO:3-46; and

c) detecting said nucleic acids, an elevation of said nucleic acid levels obtained from said pregnant test animal, relative to that obtained from said non-BVDV infected animal being indicative of BVDV in the fetus of said pregnant test animal.

28. The method of claim 27, wherein said biological sample is selected from the group consisting of blood, mononuclear cells present in blood, tissue, and urine.

29. A method for diagnosing BVDV in the fetus of a pregnant ruminant test animal comprising:

a) obtaining at least one biological sample from a pregnant test animal and from a non-BVDV infected animal;

b) contacting said samples with a detectably labeled antibody immunospecific for one or more proteins or peptide fragments encoded by a nucleic acid sequence shown in SEQ ID NO:3-46; and

c) detecting said proteins or peptide fragments, an elevation of said protein or peptide fragment levels obtained from said pregnant test animal, relative to that obtained from said non-BVDV infected animal being indicative of BVDV in the fetus of said pregnant test animal.

30. The method of claim 29, wherein said biological sample is selected from the group consisting of blood, mononuclear cells present in blood, tissue, and urine.

31. A method for detecting viral surrogate marker molecules in a test animal comprising:

a) obtaining a plurality of biological samples from said test animal and from a non-virally infected animal;

b) contacting said biological sample with a composition comprising one or more viral surrogate marker molecule detection reagents in an amount effective to permit detection and quantitation of a viral surrogate molecule, if present, in said sample; and

c) determining from b) the amount of said viral surrogate marker molecule, wherein an elevation of levels of said viral surrogate marker molecule, relative to

those obtained from non-virally infected animals, is indicative of viral infection in said test animal.

32. The method of claim 31, wherein a lack of elevation of levels of said viral surrogate marker molecule indicates that the test animal is not virally infected.

33. The method of claim 31, wherein said viral surrogate marker molecule is obtained from a test subject infected with a virus selected from the group consisting of BVDV, HIV, Ebola virus, FeLv, FIP virus, Bluetongue virus and Epizootic Hemorrhagic Disease Virus.

34. A method for detecting a Bovine Viral Diarrhea Virus (BVDV) surrogate marker in infected cattle comprising:

a) obtaining a plurality of samples of mRNA from cattle infected with BVDV, and from normal non-infected cattle;

b) reverse transcribing said mRNA from said infected and non-infected cattle to generate cDNA molecules therefrom; and

c) performing a PCR select subtraction method to identify those cDNA clones which are differentially expressed between said infected and said non-infected cattle, thereby identifying a BVDV surrogate marker.

35. A method for detecting a BVDV surrogate marker which differentiates acutely infected cattle from persistently infected cattle comprising:

a) obtaining a plurality of samples of mRNA from cattle acutely infected with BVDV, and from persistently BVDV infected cattle;

b) reverse transcribing said mRNA from said acutely infected and persistently infected cattle to generate cDNA molecules therefrom; and

c) performing a PCR select subtraction method to identify those cDNA clones which are differentially expressed between said acutely infected and said persistently infected cattle, thereby identifying a BVDV surrogate marker which distinguishes acutely infected cattle from persistently infected cattle.

36. A method for detecting a BVDV surrogate marker which differentiates acutely infected cattle from vaccinated cattle comprising:

a) obtaining a plurality of samples of mRNA from cattle acutely infected with BVDV, and from vaccinated cattle;

b) reverse transcribing said mRNA from said acutely infected and vaccinated cattle to generate cDNA molecules therefrom;

c) performing a PCR select subtraction method to identify those cDNA clones which are differentially expressed between said acutely infected and said vaccinated cattle, thereby identifying a BVDV surrogate marker which distinguishes acutely infected cattle from vaccinated cattle.

37. An kit for differentially diagnosing BVDV infection comprising at least one BVDV surrogate marker detector molecule, and optionally instructions for use.

38. The kit of claim 37, wherein said BVDV surrogate marker detector molecule is selected from the group consisting of a probe or primer which specifically hybridizes with a BVDV surrogate marker nucleic acid, and an antibody which specifically binds to a BVDV surrogate marker polypeptide.